

# **Twenty-Nine Palms Band of Mission Indians**

## **Integrating Native Science Into Tribal EPA**

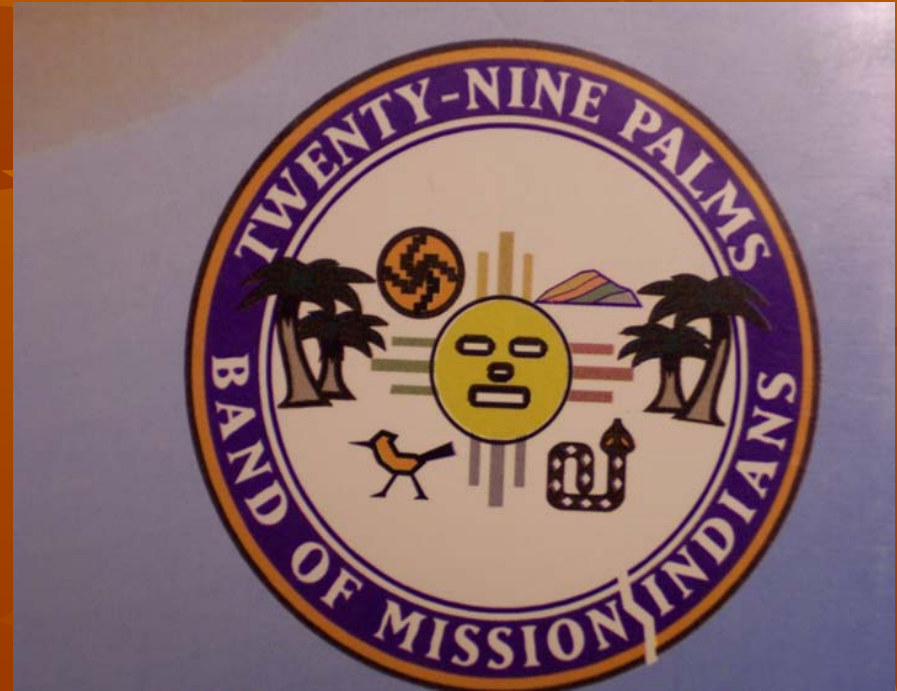
Dr. Willard Sakiestewa Gilbert,  
Professor, Northern Arizona University, Flagstaff, AZ.

Dr. Clifford E. Trafzer,  
Professor, University of California, Riverside, CA.

Dr. Anthony Madrigal, Tribal EPA,  
Twenty-Nine Palms Band of Mission Indians, CA.

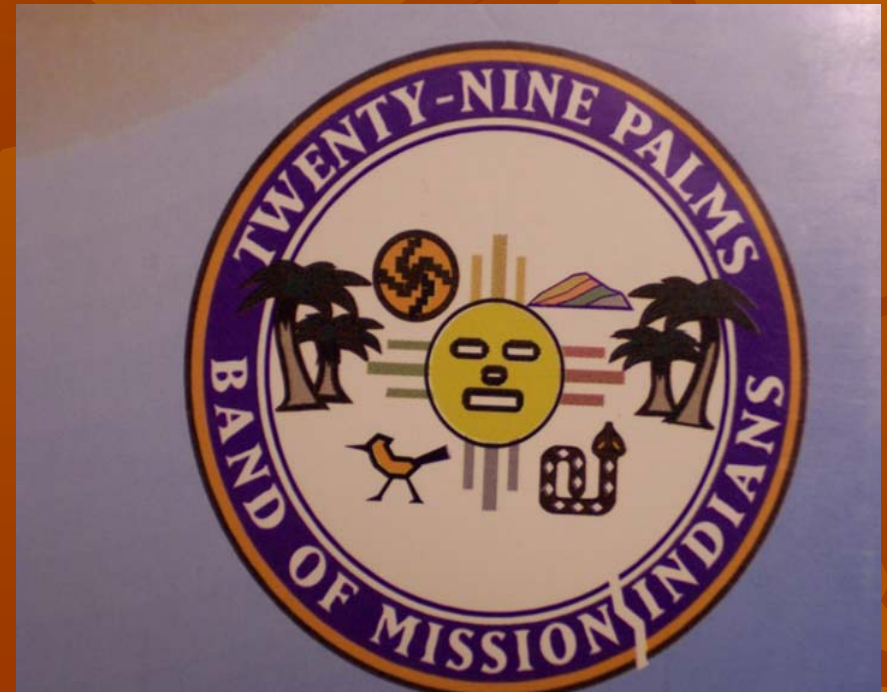
# Background

- Discussions between tribes and the EPA
  - Issues Considered:
    - Tribal traditional ways of life
    - Health and Well Being
    - Risk Assessment
  - As a Result:
    - To develop an improved health and environmental risk assessment paradigm
    - Meaningful consultation
    - Consideration of tribal health and environmental concerns, ideas and values



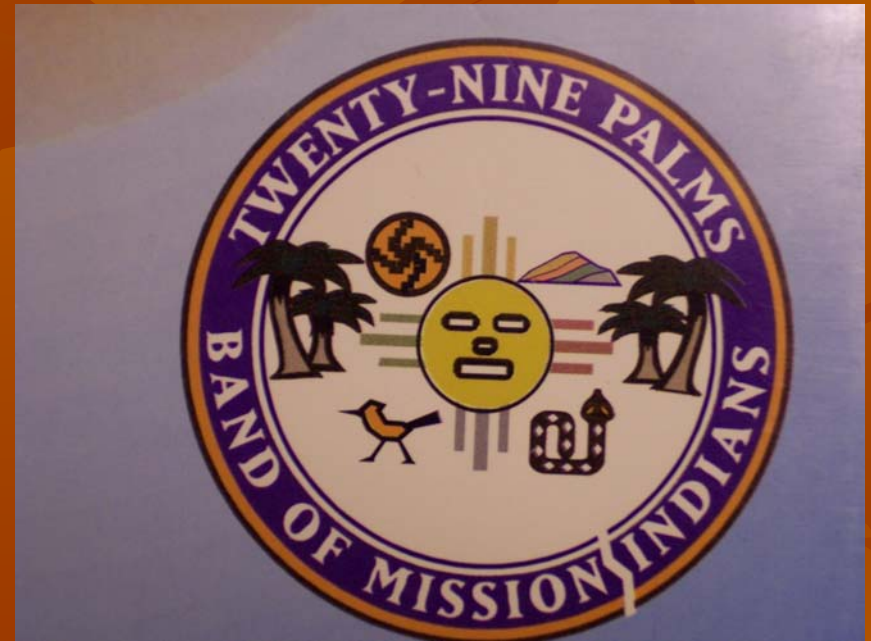
# Goals of a Cultural Science EPA Model

- In 2005, the Tribal EPA of Twenty-Nine Palms Band of Mission Indians developed a model for the inclusion of “cultural science.”
- Purposes:
  - Provide a forum for Tribes to engage as equals with EPA and other Agencies
  - More inclusive consultation process between tribes and the EPA
    - Lead to a better understanding of tribal environmental health concerns
    - Traditional life ways
    - Culture and values
    - EPA’s risk assessment process



# Goal of a Cultural Science EPA Model

- The integration of “cultural science” into current EPA risk assessment paradigms
  - Lead to a more effective, holistic and inclusive health and environmental decision making.



# Background and Methodology

- Twenty-Nine Palms Band History
- Interviews
- Research
- Direct Observations of the Environment
- Participation in Ceremony, Ritual and Songs



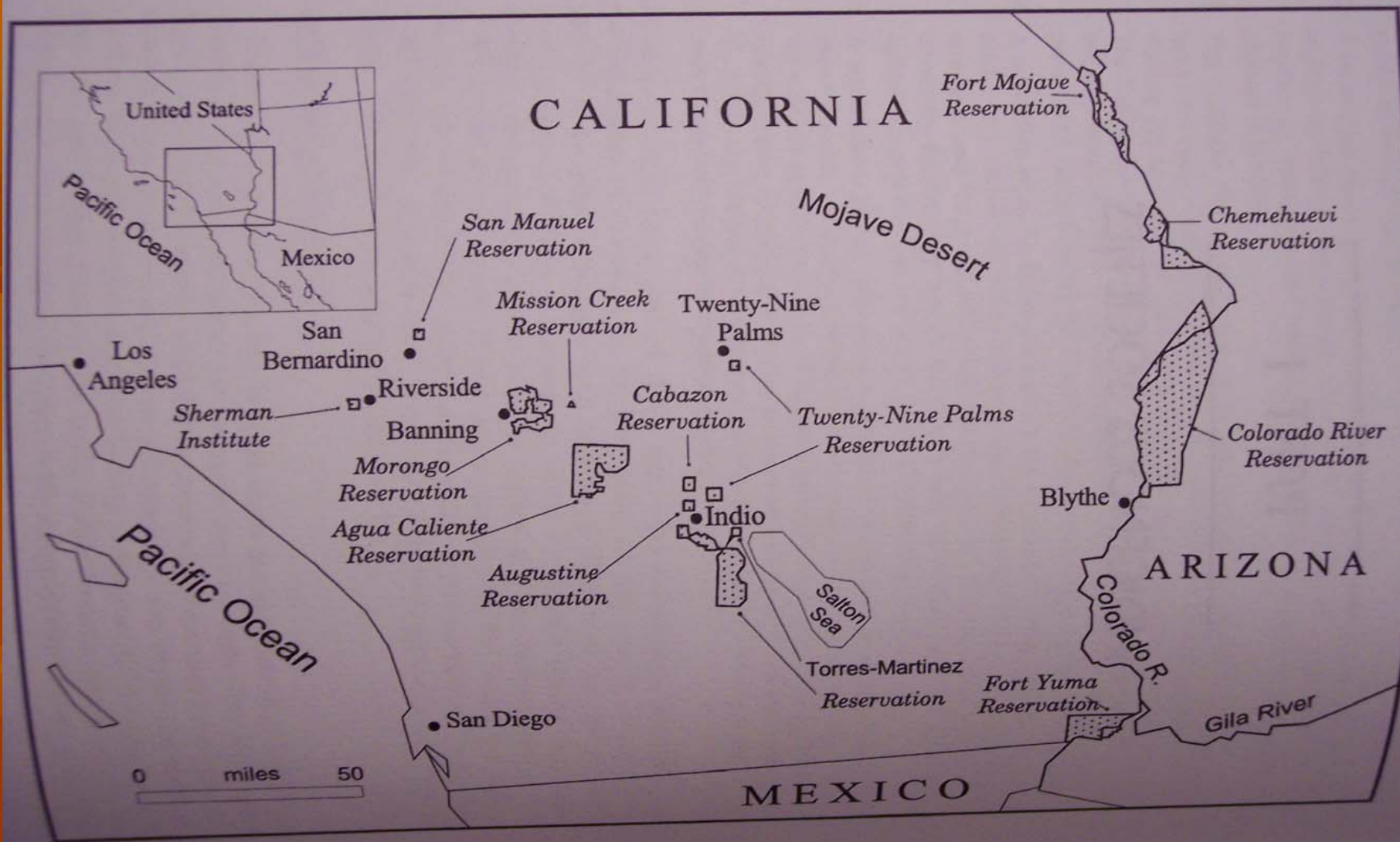
Cultural Committee - 1997



# Research and Interviews

- Dean Mike
- Jennifer Mike
- Matthew Leivas
- Larry Eddy
- Alfreda Mitre
- Conclusions/  
Recommendations:
  - Necessity for  
Consultation and a New  
Model





# What is Cultural Science?

- A range of Native processes that include:
  - Conceiving
  - Considering
  - Interacting
  - Experimenting
- Understood through direct experience, observation and communication with the natural world.
- As a result, produces ways of knowing and interacting with the natural world in which we live.



# What is Cultural Science?

- Tested ways of understanding the environment through years of observation, use, and experimentation.
- Knowledge based on understandings of proper human interrelationships with other beings (animals, plants, mountains, stars, etc.) in the natural world.
- Handed down in a body of traditional knowledge held by:
  - Tribal cultural experts
  - Cultural scientists – medicine men and women, spiritual leaders, and ceremonial people.
  - Tribal cultural elders
- Knowledge transmitted through Native stories, songs, and oral traditions.
- Is not simply a belief or superstition.

# Tribal Traditional Knowledge and Practices

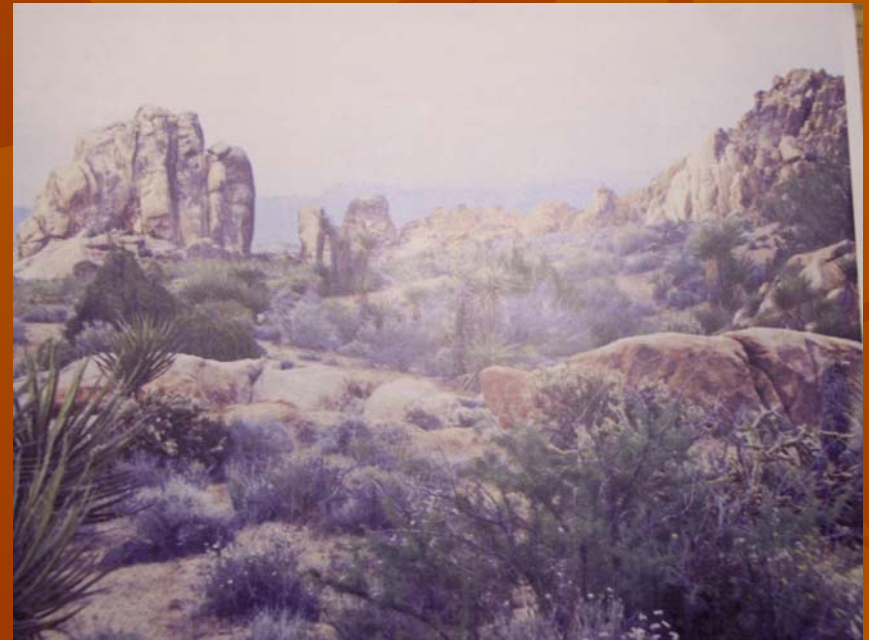
- Tribal Ecological Knowledge guides traditional land management of wild resources and practices such as:
  - Tilling
  - Pruning
  - Transplanting and sowing wild seeds
  - It includes traditional practices such as:
    - Burning grasses in order for plants to produce better and more effectively.



Old Woman Mountain  
Preserve-USFW

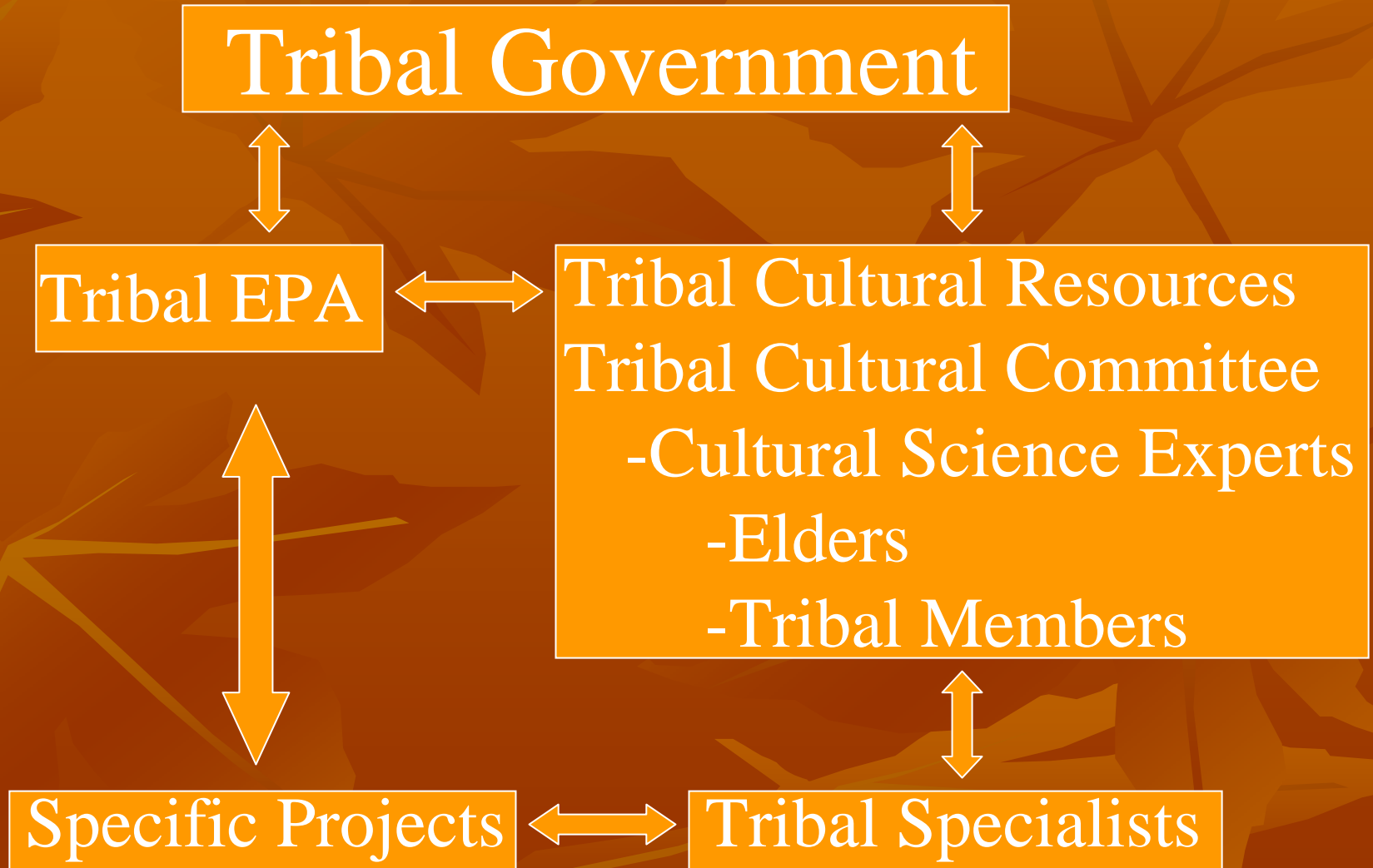
# Tribal Traditional Knowledge and Practices

- Consists of special knowledge held by
  - Tribal experts of places, resources, plants and animals
    - Ecological system – out of balance (Mr. Eddy)



Old Woman Mountain  
Preserve-USFW

# Model for Consultation



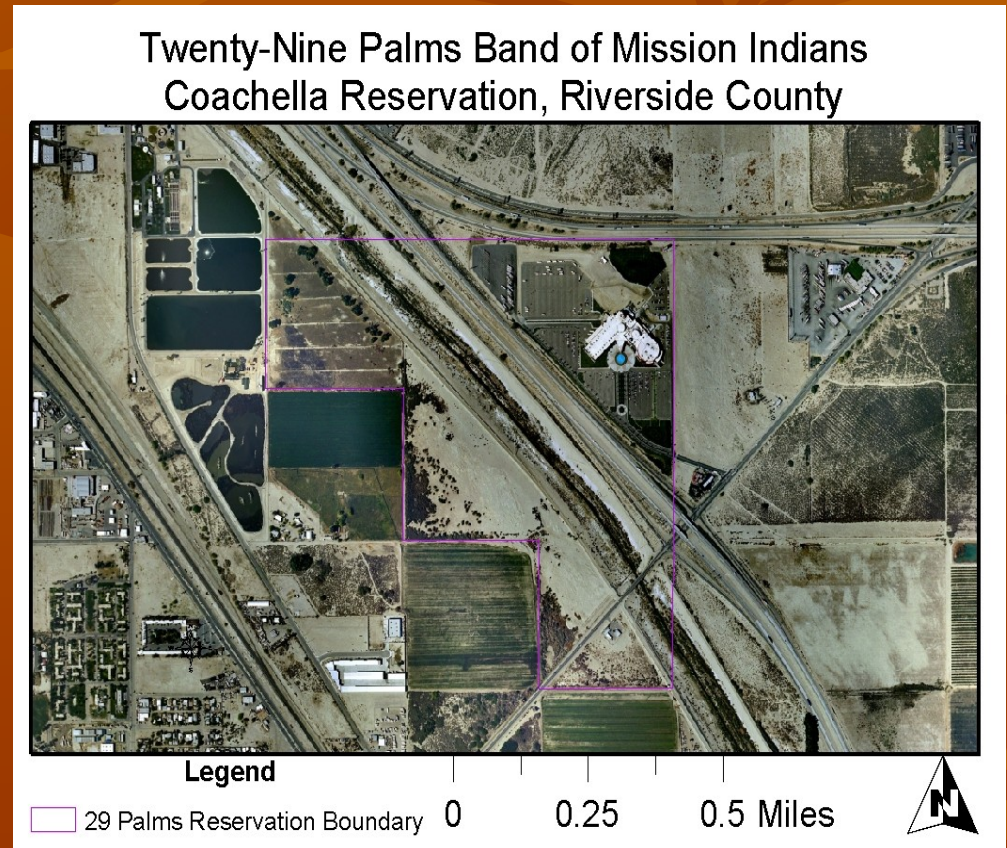


# Guidance for Consultations with Cultural Committee, TEPA and EPA

- Access and sharing of all available information  
-confidentiality
- Opportunity for mutual education on EPA risk assessment protocols and tribal values
- Mutual respect for each participant's views
- EPA and Tribal EPA to Support Cultural Science through Targeted Funding

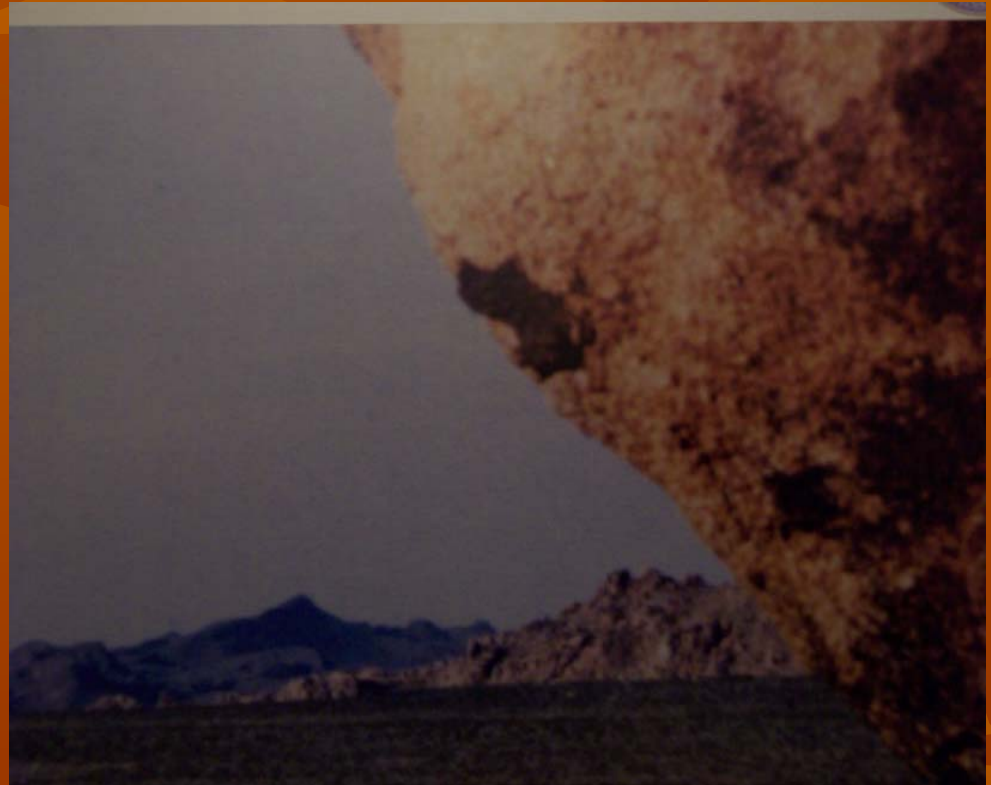
# Specific Projects

- Pollutants in Colorado River
- Dredging Whitewater River
- Habitat Loss



# Model for Integration of Cultural Science

- Phase I
  - Implementation of Consultative Model
- Phase II
  - Collection of Data, including Traditional Knowledge:
    - Habitat
    - Water
    - Cultural Sites
- Phase III
  - GIS Mapping



Old Woman Mountain from Cave

# For Additional Information Contact:

Dr. Willard Sakiestewa Gilbert (Hopi)

E-Mail: [willard.gilbert@nau.edu](mailto:willard.gilbert@nau.edu)

Dr. Clifford T. Trafzer (Wyandot)

E-Mail: [CETrafzer@aol.com](mailto:CETrafzer@aol.com)

Dr. Anthony Madrigal (Cahuilla)

E-Mail: [anthonymad2002@yahoo.com](mailto:anthonymad2002@yahoo.com)